

## ABSTRACT OF THE DISCLOSURE

The invention prevents a pattern arising from periodicity of dot arrangements from appearing as noise, such as a streak, when a plurality of different dot arrangements are used repeatedly in a unit of a predetermined number of the dot arrangements for the same level of gradation of input image data, and thereby makes it possible to print a high-quality image. To this end, when input image data quantized to one of multivalued levels of gradation is allocated to a dot arrangement of  $M \times N$ , a matrix of  $A \times B$  created by combining a plurality of different dot arrangements each displaying the same level of gradation of the input image data in a raster direction and in a column direction is used as a minimum unit, and the dot arrangement of this matrix is allocated to the input image data.

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